

What is claimed is:

1. An apparatus for upgrading a software, comprising:  
a version comparing unit for comparing a version of a software code  
5 included in a broadcasting signal and a version of a previously installed software  
code to determine a newer version; and  
an upgrade processing unit for installing the software by abstracting  
software data in the software code if the version of the software code is a new  
version.

10 2. The apparatus of claim 1, wherein the software code includes a  
data of an upgraded system software.

15 3. The apparatus of claim 1, wherein the software is a system  
software to be installed in an apparatus for receiving digital broadcasting.

4. The apparatus of claim 1, wherein the broadcasting signal is an  
advertisement broadcasting signal.

20 5. The apparatus of claim 1, wherein the software is an upgraded  
software.

6. The apparatus of claim 1, further comprising:  
a code detecting unit for detecting whether the software code is inserted in  
25 the broadcasting signal.

7. The apparatus of claim 1, further comprising:

a mode setting unit for setting a download-possible mode by determining whether the code of the system software can be downloaded when an advertisement broadcasting signal in which the software code is inserted is received.

8. The apparatus of claim 1, further comprising:

a storage unit for storing the software code.

9. The apparatus of claim 1, further comprising:

an error detecting unit for determining whether an error exists in the stored software code.

10. The apparatus of claim 1, the broadcasting signal is an advertisement broadcasting signal corresponding to an advertisement of a certain company.

11. A method for upgrading a software, comprising the steps of:

receiving a broadcasting signal in which a user data containing a software code is inserted; and

installing the software by abstracting software data from the software code.

12. The method of claim 11, wherein the broadcasting signal is an advertisement broadcasting signal.

13. The method of claim 11, wherein the software is a system software to be installed in an apparatus for receiving digital broadcasting.

5 14. The method of claim 11, further comprising a step of:  
checking whether the software code corresponds to a model of the receiving apparatus is received or an error exists when the broadcasting signal in which the software code is inserted is received.

10 15. The method of claim 11, further comprising a step of:  
comparing a version of the software code and a version of the code of a previously installed software to determine a newer version.

15 16. The method of claim 11, further comprising a step of:  
deleting the received software code in case a version of the software code is not a new version and checking whether the software will be upgraded in case the version is a new version.

20 17. The method of claim 11, wherein the software is installed or  
deleted according to a response of a user.

18. The method of claim 11, wherein the user data includes:  
a header block including basic index information on the software; and  
a payload block including the software code.

19. The method of claim 18, wherein the header block and payload block are formed in a packet form.

20. The method of claim 18, wherein the header block comprises:

5 an applied receiver description code block for checking a receiving apparatus which performs software upgrade by recording brand name and model number of the receiving apparatus;

a version number block for showing version information of the software code;

10 a current packet number block for showing order of the current packets when receiving the software code divided into a number of packets;

a last packet number block for checking the total number of the packets;

a status flag block for recording an error correction type and information of beginning and ending address of a target memory;

15 a payload length block for recording the length of a payload; and

a software version information block for recording guide information about the code version of the software.

21. The method of claim 18, wherein the payload block comprises:

20 a software code unit for recording the code of the software which is divided into packet units with a certain size; and

error check block for checking whether an error exists in the received packet and correcting the error.

22. A method for upgrading a software, comprising a step of:

transmitting user data including a header block containing basic index information on software and a payload block containing a software code by inserting it in the broadcasting signal.

5           23.     The method of claim 22, wherein the user data is inserted in an advertisement broadcasting signal.

10           24.     The method of claim 22, wherein the software code includes data of an upgraded system software.

15           25.     The method of claim 22, wherein the header block and payload block are formed in a packet form.

20           26.     The method of claim 22, wherein the header block comprises:  
an applied receiver description code block for checking a receiving apparatus which performs software upgrade by recording brand name and model number of the receiving apparatus;

a version number block for showing version information of the software code;

a current packet number block for showing order of the current packets when receiving the software code divided into a number of packets;

a last packet number block for checking the total number of the packets;

a status flag block for recording an error correction type and information of beginning and ending address of a target memory;

25           a payload length block for recording the length of a payload; and

a software version information block for recording guide information about the code version of the software.

27. The method of claim 22, wherein the payload block comprises:

5 a software code unit for recording the code of the software which is divided into packet units with a certain size; and  
error check block for checking whether an error exists in the received packet and correcting the error.

10 28. An apparatus for upgrading a software, comprising:

a code detecting unit for receiving a digital advertisement broadcasting signal and detecting whether the software code is inserted in the broadcasting signal;

15 a mode setting unit for setting a download-possible mode by determining whether the system software code can be downloaded;

a storage unit for downloading and storing the code of the system software in case of the download-possible mode;

an error detecting unit for determining whether an error exists in the stored code of the system software;

20 a version comparing unit for comparing a version of the code of the downloaded software and a version of the code of a previously installed software to determine a newer version; and

25 an upgrade processing unit for installing the software included in the software code by abstracting software data in the software code in case the code of the stored software is a new version without errors.

29. The apparatus of claim 28, wherein the software code includes data of an upgraded system software.

5 30. A method for upgrading a software, comprising the steps of:  
checking whether a software code corresponds to a model of the receiving apparatus or an error exists when a broadcasting signal in which the software code is inserted is received;

10 comparing a version of a software code and a version of a previously installed software code to determine a newer version;

deleting the code of the received software in case the code version of the software is not a new version and checking whether the software will be upgraded in case the version is a new version; and

15 installing the software included in the code of the system software according to the response of the user.

31. The apparatus of claim 30, wherein the software code includes data of an upgraded system software.